



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,644	03/23/2004	Vahid Goudarzi	CE12694JME	2480

24273 7590 07/17/2006

MOTOROLA, INC
INTELLECTUAL PROPERTY SECTION
LAW DEPT
8000 WEST SUNRISE BLVD
FT LAUDERDAL, FL 33322

EXAMINER

SANDVIK, BENJAMIN P

ART UNIT	PAPER NUMBER
----------	--------------

2826

DATE MAILED: 07/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/806,644	Applicant(s) GOUDARZI, VAHID	
	Examiner Ben P. Sandvik	Art Unit 2826	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-12 is/are allowed.
- 6) ☒ Claim(s) 13-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Suppelsa et al (U.S. Patent #5411199).

With respect to **claim 13**, Suppelsa teaches solder applied onto conductive areas on the substrate (Fig. 4, 302 and Col 2 Ln 57-58) including a conductive shield track for at least one shield (Fig. 2, track 112 on substrate 110), wherein the conductive shield track serves the electrical function of ground (Col 2 Ln 26-31, substrate 110 is connected to ground potential), components placed onto the conductive areas for the components (Fig. 4, 304 and Col 2 Ln 60), a first reflow step (Fig. 4, 306) to provide solder joints for the components and a selectively solder clad area over the conductive shield track (Col 3 Ln 23), a metallic shield placed over the selectively solder clad area (Fig. 4, 314), reflowing the assembly (Fig. 4, 316).

With respect to **claim 16**, Suppelsa teaches that the solder applied onto the conductive areas is solder perform (Fig. 4, 302).

With respect to **claim 17**, Suppelsa teaches a predetermined area on the substrate with at least a portion of a metallized trace pattern (Fig. 2, 112),

wherein the metallized trace pattern serves the electrical function of ground (Col 2 Ln 26-31, substrate 110 is connected to ground potential); solder applied to the metallized trace portion (Fig. 4, 302); components placed on portions of the metallized trace pattern (Fig. 4, 304); wherein the processed printed circuit board is reflowed a first time (Col 3 Ln 23); a shield placed over the cladded trace pattern (Fig. 4, 314); and reflowing the substrate (Fig. 4, 316).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suppelsa, in view of Degani et al (U.S. Patent #5346118).

With respect to **claim 14**, Suppelsa teaches all of the limitations of claim 13, but does not teach that the step of placing components comprises the step of placing surface mount components onto the conductive areas. Degani teaches the placing of surface mount components onto a substrate (Col 1 Ln 14). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the step in Suppelsa of placing components on the

substrate to be placing surface mounted components on the conductive areas as taught by Degani in order to secure the components to the substrate.

With respect to **claim 15**, Suppelsa teaches all of the limitations of claim 13, but does not teach that the step of applying solder comprises the step of applying solder paste onto the conductive areas. Degani teaches that a step of applying solder to form conductive pads for component to be connected comprises applying solder paste (Col 4 Ln 18). It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply solder paste to the conductive areas as taught by Degani in the step of applying solder in Suppelsa in order to enhance the connection between the components and shield track and the substrate.

Allowable Subject Matter

Claims 1-12 are allowed.

Response to Arguments

Applicant's arguments filed 4/27/2006 have been fully considered but they are not persuasive. The applicant argues that the added limitation of "the conductive shield track serves the electrical function of ground" distinguishes claim 13 over the Suppelsa reference. However, the Suppelsa reference discloses that the heat sink substrate (Fig. 2, 110), and the "conductive shield track" (Fig. 2, 112), are connected to ground (Col 2 Ln 26-31). Therefor, the Suppelsa reference meets all of the limitations of amended

claim 13 and the rejection is sustained. By similar reasoning, the rejection of claim 17 in view of Suppelsa is also sustained.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ben P. Sandvik whose telephone number is (571) 272-8446. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

bps



EVAN PERT
PRIMARY EXAMINER